

when the clock is running, revolve once an hour on a horizontal axis this will do away with the effect of gravity in determining the direction of growth in the germinating seeds. Now fill the box half full of moist sawdust, place on this a number of easily germinating seeds and fill the remainder of the box with dry sawdust, held in place by tying mosquito netting over the mouth of the box. Set the clock going and let it stand in a warm place with the dry end towards the stove or radiator. More moisture may be supplied from time to time, if necessary, through little holes punched in the bottom of the box. When examined after a day or two the roots will be found growing mainly towards the moist end of the box. The seeds may be partly germinated before putting them in the box.—GOODWIN D. SWEZEY, *Doane College, Crete, Nebraska.*

OPEN LETTERS.

A botanical "year-book."

Having read your editorial in the February number, I am quite of your opinion that an American compilatory work like that of Just would be of great value to botanists, but too extensive for the GAZETTE. But you could do a very good work by giving short annual summaries of the new species and genera published in America, with references indicating place of publication and habitat, as has been done since the close of 1885 by the British *Journal of Botany*. Every year there need be only a few pages, but they would be of high value to systematic botanists. It will thus become a necessary local and permanent continuation of the gigantic work now in preparation at Kew. Of course the first summary ought to include five years, beginning with the close of 1885.

Leipzig.

OTTO KUNTZE.

Collections of weeds.

After a large correspondence, the question, what are our worst weeds, seems fairly well answered for all portions of our country. It is now my intention to issue sets of the worst hundred of these pests of the farm and garden, to be followed in the near future by parallel collections of the seeds of the same species. In an extended labor of love, as this is, the writer feels justified in asking all botanists and others who look with favor upon the enterprise, to kindly express by postal card their approval or more substantial words of encouragement. The collection, while more particularly designed for the botanists, horticulturists and agriculturists of the agricultural colleges and experiment stations, will, it is confidently hoped, fill a place in any herbarium not before occupied. The list of species will be made up from the scores of reports of botanists in all parts of the country upon *their* twenty worst weeds and will include the most pestiferous plants of the various regions of the United States. The price, not yet fixed upon, will be not far from eight dollars for the first century.

BYRON D. HALSTED.

Rutgers College, New Brunswick, N. J.